

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604

DATE: NOV 11 2014

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
DP&L Stuart Station- Aberdeen, Ohio

FROM: Patrick Miller, Environmental Engineer *pm*
AECAB (MN/OH)

THRU: Brian Dickens, Section Chief *BD*
AECAB (MN/OH)

TO: File

ATTACHMENTS: Original Method 9 Visual Emission Observation Form (Dated 9/30/2014)
Typed Method 9 Visual Emission Observation Form (Dated 9/30/2014)

Facility: The Dayton Power and Light Company (DP&L) Stuart Station

Location: 745 U.S. Route 52, Aberdeen, Ohio 45101

Date of Inspection: September 30, 2014

EPA Inspectors:

Ethan Chatfield, EPA, Environmental Engineer

Patrick Miller, EPA, Environmental Engineer

Facility Attendees:

None

Off-site Observation of Plant:

On September 30, 2014, Mr. Chatfield and Mr. Miller of the EPA observed a secondary plume and visible emissions from the stack at the DP&L Stuart Station (Figures 1-4). Method 9 visible emissions readings were performed by Mr. Chatfield for 30 minutes from 2:39 PM-3:09 PM. EPA decided not to inspect the facility at that time and would continue with the already planned itinerary.

Photos:



Figure 1 DP&L Stuart Station (seen from Kentucky side of Ohio River)



Figure 2 DP&L Stuart Station Secondary Plume



Figure 3 DP&L Stuart Station close-up of secondary plume



Figure 4 DP&L Stuart Station extent of secondary plume

Standard bcc's: Official file copy w/attachment(s)

Other bcc's:

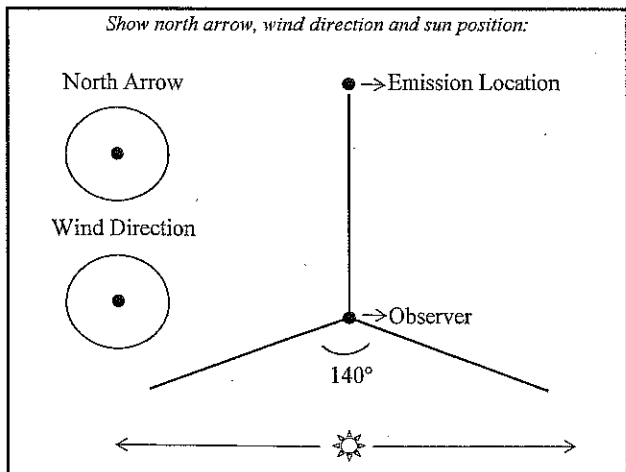
Creation Date:	November 4, 2014
Filename:	C:\Users\pmille02\Documents\EPAWork\Projects\DP&L Stuart Station\DP&L Stuart Station Inspection Report 09 30 2014.docx
Legend:	ARD:AECAB:AECAS(MN/OH): P. Miller

METHOD 9 VISIBLE EMISSION OBSERVATION FORM

Date: 9/30/14
 Observer: Ethan Chatfield
 Affiliation: U.S. EPA

Source name: DP&L Start Station
 Source address: 994 US Hwy 52
Manchester, Ohio 45144

Facility type: Power Plant



Emission location (stack, roof, etc.):	Estimated emission location height: <u>800</u> feet
Direction from emission location: <u>SW</u>	Estimated distance to emission location: <u>2,760</u> feet

Plume color: bluish, white
 Background: sky
 Background color: blue

Sky color: Blue
 Cloud color: Very few, white

Estimated wind speed: 1-5 mph
 Approximate wind direction: SE

Temperature: 56 °F

Additional Comments
 (photos/video taken, etc.):
photos taken

40 C.F.R. Part 60, Appendix A, Reference Method 9

2.3 Observations. "Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present."

2.3.1 Attached Steam Plumes. "When condensed water vapor is present within the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible. The observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made."

2.3.2 Detached Steam Plume. "When water vapor in the plume condenses and becomes visible at a distinct distance from the emission outlet, the opacity of emissions should be evaluated at the emission outlet prior to the condensation of water vapor and the formation of the steam plume."

"On an overcast day when no shadows are observed and the lighting is diffuse or flat, this rule might not be as important from a scientific standpoint as on a bright, sunny day. Observers might have trouble defending their positions in court if they disregard the rule. The best practice for an observer is to always have the sun at his or her back, even if it is not visible and no shadows are cast." <http://www.epa.gov/ttn/emc/methods/VECourse.pdf>

Time	Minute	Seconds				Steam Plume?		Comments
		0	15	30	45	Attached	Detached	
2:39	1	20	15	20	15			Steam plume w/attached brown-blue plume continuing after steam.
	2	10	25	30	10			
	3	30	10	10	10			
	4	30	25	25	20			
	5	30	10	15	5			
	6	35	25	25	30			
	7	25	15	25	30			
	8	30	25	30	30			
	9	20	15	20	20			
	10	10	10	15	10			
	11	15	15	20	15			
	12	5	5	15	15			
	13	20	15	15	10			
	14	25	20	15	30			
	15	40	35	35	40			
	16	40	40	40	35			
	17	25	30	15	15			
	18	35	15	20	25			
	19	35	30	35	20			
	20	25	20	25	25			
	21	20	30	20	25			
	22	40	40	30	30			
	23	35	20	25	20			
	24	25	20	10	10			
	25	10	10	5	10			
	26	10	10	5	15			
	27	5	10	5	10			
	28	15	10	15	25			
	29	10	20	20	25			
2:09	30	20	30	30	35			

(Continued on other side ->)

Signature:

Date last certified:

Ethan Chatfield
4/15/14

Time	Minute	Seconds				Steam Plume?		Comments
		0	15	30	45	Attached	Detached	
	31							
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METHOD 9 VISIBLE EMISSION OBSERVATION FORM

Date: 9/30/14
 Observer: E. Chatfield
 Affiliation: US EPA

Source name: DP&L - Stuart Station
 Source address: 994 US Hwy 52
Manchester, OH 45144

Facility type: Coal-fired power plant

Emission location (stack, roof, etc.): stack	Estimated emission location height: 800 feet
Direction from emission location: southwest	Estimated distance to emission location: 2,700 feet

Plume color: **bluish white**
 Background: **sky**
 Background color: **blue**

Sky color: **blue**
 Cloud color: **minimal**

Estimated wind speed: **1 mph**
 Approximate wind direction: **SE**

Temperature: **56 F**

Additional Comments
 (photos/video taken, etc.):
Photos taken during observations.

Time	Minute	Seconds				6-min	Comments
		0	15	30	45	Avg	
2:39pm	1	20	15	20	15		
	2	10	25	30	10		
	3	30	10	10	10		
	4	30	25	25	20		
	5	30	10	15	5		
	6	35	25	25	30	20	
	7	25	15	25	30		
	8	30	25	30	30		
	9	20	15	20	20		
	10	10	10	15	10		
	11	15	15	20	15		
	12	5	5	15	15	18	
	13	20	15	15	10		
	14	25	20	15	30		
	15	40	35	35	40		
	16	40	40	40	35		
	17	25	30	15	15		
	18	35	15	20	25	26	✓
	19	35	30	35	20		
	20	25	20	25	25		
	21	20	30	20	25		
	22	40	40	30	30		
	23	35	20	25	20		
	24	25	20	10	10	26	✓
	25	10	10	5	10		
	26	10	10	5	15		
	27	5	10	5	10		
	28	15	10	15	25		
	29	10	20	20	25		
3:09	30	20	30	30	35	15	

Signature:
 Date last certified:

E. Chatfield
 4/15/14